

THE EUROPEAN SUBGENUS ACTEDIUM (BEMBIDION)  
IN NORTH AMERICA.<sup>1</sup>

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In a box of Albertan *Bembidion* recently received for determination from Mr. F. S. Carr, the writer found two specimens of an apparently undescribed species belonging to the subgenus *Actedium* Mots., a group not heretofore recorded from this continent. *Actedium*, which was erected in 1864 (8) for two European species, was defined as follows: elytra subquadrate (presque carré); the striæ distinctly punctured, effaced toward the apex, not deeply impressed, the 7th visible, the third with two small foveæ; head and thorax punctate, the latter cordate with the basal impressions feeble. It may be added that the eyes are prominent, the humeri indistinctly angulate, the 8th stria close to the margin, and the mentum tooth entire and triangular. The two original species of the subgenus, together with a third described from Europe in 1870 (6) and the one described below, form a homogeneous group, the habitus being like that of a very stout *Lachnophorus*.

In comparing *Actedium* to our other groups of *Bembidion*, it seems best to mention the closely related European subgenus *Princidium* Mots. This was described in the same paper as *Actedium*, and was separated from it chiefly by having the form narrower and the elytral striæ entire. The two subgenera together are equivalent to the third group of Jacquelin-Duval's monograph, "De Bembidiis Europæis" (7).

It may be noted at this point that the several American species included in *Princidium* by Motschulsky, notably those now listed as *dilatatum* Lec., *honestum* Say, and *concolor* Kby., have all been referred to *Peryphus* Steph. by Casey (1). Of the two European species placed in *Princidium*, only one, *punctulatum* Drap., can be retained. The other, *ruficolle* Gyll., has a very different habitus and has the elytral foveæ on the third interval. Since no genotype has been assigned for *Princidium* thus far,

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the writer here designates *Bembidion punctulatum* Drap. as the genotype of that subgenus.

It may also be noted that the species of Jacquelin-Duval's groups four and five, which were associated with group three in his monograph because of the punctuation of the head, all have the elytral foveæ on the third interval, a character noted but not much valued by that author. Since the form described in this paper combines the habitus of *Actedium* with an elytral striation nearly as complete as in *Princidium*, the two subgenera may have to be united under the latter name, which has priority by a page.

The species of *Actedium*, and that of *Princidium* as restricted above, differ from all hitherto described American species of *Bembidion* by having the depressions in the posterior angles of the prothorax entirely obsolete, and by having distinct non-setigerous punctures on the head and the sides of the pronotum. A partial exception is found in *B. scopulinum* Kby., in which there is a tendency toward rugosity on the floor of the frontal sulci, and of which a considerable percentage of specimens have a few scattered punctures on the front. In *B. lævigatum* Say there are a few irregular frontal punctures, but these are setigerous and are not comparable. Several species of the *ustulatum* group have the base of the thorax, and more rarely an area near the apex, rugose; and this, too, is best developed in *scopulinum*. The sides of the thorax, however, are quite impunctate even in this species.

Except for its subdilated hind body and the unique characters noted above, *Actedium* is inseparable from *Peryphus* as the latter is employed by Casey (1); and it seems most closely related to that part of *Peryphus* containing the more convex species of Hayward's (4) *ustulatum* group. *Princidium*, which combines the habitus of a convex *Peryphus* with the technical characters of *Actedium*, brings those two subgenera even closer together. The gap remaining, however, seems too great, particularly as regards the structure of the posterior angles of the prothorax, to allow *Actedium* and *Peryphus* to be united at present. The two subgenera should, of course, be associated on our lists.

Before proceeding to the description, the writer must ac-

knowledge his indebtedness to the authorities of the Museum of Comparative Zoology at Cambridge for the opportunity of examining specimens of all the European species mentioned in this paper, and of referring to the invaluable collections of Leconte and Hayward.

The following species, as already indicated, seems completely congeneric with the European *Bembidion* (*Actedium*) *kusteri* Schaum and *B.* (*Act.*) *pallidipenne* Illig.

### ***Bembidion* (*Actedium*) *lachnophoroides* n. sp.**

Convex, posterior parts robust; head and thorax viridiaeneus; elytra smoky-yellow, with apex and a slightly post-median transverse fascia blackish, the latter slanting slightly forward from the suture. Head as wide as thorax at widest part, strongly alutaceous, rather sparsely punctured with very distinct punctures; frontal striae broad, shallow, and parallel, the floor longitudinally rugose; antennae stout, piceus with the basal joint paler, intermediate joints about twice as long as wide. Prothorax scarcely wider than an elytron, about one eighth wider than long, subcordate, narrower at base than apex, strongly alutaceous; median line well impressed, transverse impressions indistinct; disk impunctate at middle, slightly wrinkled transversely; sides with sparse, large punctures; base and apex strongly and longitudinally rugose; lateral margins narrow; hind angles not striate, slightly obtuse but not rounded, not prominent; basal impressions entirely obsolete except for the slightly broadened margin where the tactile seta arises. Elytra, alutaceous, together one half longer than wide, sides straight and subparallel in median third; humeri not prominent; striae moderately impressed, moderately punctured on basal two thirds; first, second, and seventh distinct at apex, others slightly abbreviated; seventh slightly less impressed on disk than sixth; third with two moderate foveae. Head and thorax piceous or reddish beneath; abdomen entirely flavo-testaceous; Legs entirely pale. Length ( $\sigma$  ♀) 4.25 mm. Width ( $\sigma$  ♀) 1.8-1.9 mm.

This species is most closely related to *B. kusteri* Schaum of Europe, but is distinct by the more complete elytral striation, the dark antennae, the posterior rather than anterior elytral markings, and the pale abdomen. The last character, however, may be due to the immaturity of the types.

Both the  $\sigma$  holotype and ♀ allotype were collected by Mr. F. S. Carr at Medicine Hat, Alberta, Sept. 8, 1923. By arrangement with Mr. Carr the holotype will be deposited in the Canadian National Museum; the allotype is in my own collection.

The occurrence of European groups, or even species, in North America is a common phenomenon of which *Actedium* is only an additional example (2, 3). The subgenus should be looked for

in the gulf of St. Lawrence region and in Alaska, though it had not been recorded from Siberia up to 1896 (5).

The following papers have been referred to, by number, in the preceding pages:

1. Casey, T. L.—*Bembidiinæ*; Memoirs on Coleoptera, VIII, Lancaster, 1918, p. 46-85, for *Peryphus*.
2. Champion, G. C.—List of Coleoptera common to Britain and North America; Ent. Month. Mag., ser. 2, VI, 1895, p. 150-155.
3. Hamilton, John—Catalogue of Coleoptera common to North America and northern Europe and Asia; Trans. American Ent. Soc., XXI, 1894, p. 345-416.
4. Hayward, Roland—On the species of *Bembidion* of America north of Mexico; Trans. American Ent. Soc. XXIV, 1897, p. 32-143.
5. Heyden, Lucus von—Catalog der Coleopteren von Siberien; Deutche Ent. Zeits. (special no.), 1881; Nachtrag I, 1893; Nachtrag II, 1896.
6. Heyden, Lucus von—Reise nach Spanien; Berlin, 1870, p. 63.
7. Jacquelin-Duval, Camille—De *Bembidiis* Europæis; Ann. soc. ent. France, sér. 2, IX, 1851, p. 441-576; 1852, p. 101-236.
8. Motschulsky, T. Victor von—Énumération des nouvelles espèces, IV; Bull. Moscou XXXVII, 3, 1864, p. 181 (*Princidium*); p. 182 (*Actedium*).